UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,851	11/04/2003	Andrew C.P. Liu	TS01-1542	5803

42717 7590 03/08/2007
HAYNES AND BOONE, LLP
901 MAIN STREET, SUITE 3100
DALLAS, TX 75202

EXAMINER	
RADTKE, MARK A	
ART UNIT	**PAPER NUMBER**
2165	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/700,851	LIU, ANDREW C.P.	
	Examiner	Art Unit	
	Mark A. X Radtke	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 December 2006 has been entered.

2. In response to communications filed on 11 December 2006, claim(s) 1, 7, 9, 11, 14 and 21-22 is/are amended per Applicant's request. Therefore, claims 1-26 are presently pending in the application, of which, claim(s) 1, 9, 14 and 22 is/are presented in independent form.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeyaraman (U.S. Pat. No. 6,311,187) and in view of Peters ("Advanced Tutorial – Simulation-Based Scheduling and Control" from Proceedings of the 1996 Winter Simulation Conference).

As to claim 1, Jeyaraman teaches a method of improving the performance of a relational database data reduction from a source database to a target database (see Abstract), comprising of:

analyzing time and date stamp of a record in the source database to determine if the record has been changed (see figure 3, step 308 and column 5, lines 43-47);

in response to a determination that the record has been changed, locating the record in a target table of the first equipment in the target database based on an identifier of the lot in the record (see column 5, lines 56-60);

deleting the record from the target table of the first equipment in the target database (see column 5, lines 56-60); and

inserting the record into a target table of the second equipment in the target database (see figure 3, step 316 and column 6, lines 16-18).

Jeyaraman does not explicitly teach

analyzing time and date stamp of a record in the source database to determine if the record has been changed as a result of a change of position of a lot from a first equipment to a second equipment.

Peters teaches a method of improving the performance of a relational database data reduction from a source database to a target database (see Abstract), comprising of:

analyzing time and date stamp of a record in the source database to determine if the record has been changed as a result of a change of position of a lot from a first equipment to a second equipment (see section 3, "Definition of States", pages 195-196, spanning paragraph through Table 1 and see also section 2, "Environment", page 195, left and right columns, spanning paragraph).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Jeyaraman by the teaching of Peters because "[t]he combination of a MES [Manufacturing Execution System] system with a database system is extremely common" (see Peters, section 4, paragraph 4, lines 3-5).

As to claims 2 and 15, Jeyaraman, as modified, teaches wherein the target table of the first equipment includes at least one lot that is associated with the first equipment (see column 5, lines 56-60).

As to claims 3 and 16, Jeyaraman, as modified, teaches wherein the target table of the second equipment includes at least one lot that is associated with the second equipment (see column 5, lines 56-60).

As to claims 4, 12, 17 and 25, Jeyaraman, as modified, teaches wherein the analyzing step, the locating step, the deleting step and the inserting step are performed by a loader program (see Abstract).

As to claims 5 and 18, Jeyaraman, as modified, teaches wherein the record in the source database that has been changed is no longer valid (see column 5, lines 33-54).

As to claims 6 and 19, Jeyaraman, as modified, teaches wherein the source database comprises a source table of the first equipment and a source table of the second equipment (see Peters, Table 1).

As to claims 7, 10, 20 and 23, Jeyaraman, as modified, teaches wherein the source table of the first equipment is synchronized with the target table of the first equipment, and wherein the source table of the second equipment is synchronized with the target table of the second equipment (see column 2, lines 1-24).

As to claims 8 and 21, Jeyaraman, as modified, teaches wherein the record in the target table can be exported to another database or software system (see column 4, lines 42-45).

As to claim 9, Jeyaraman teaches a method for refining data replication between a source database and a target database (see Abstract), comprising of:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claims 11 and 24, Jeyaraman, as modified, teaches wherein the determining step comprises analysis of time and date stamp of the record in said source database (see Examiner's comments regarding claim 1).

As to claims 13 and 26, Jeyaraman, as modified, teaches wherein said loader program is capable of displaying on a central monitor a manufacturing equipment environment and a lot status (see figure 1, Display 108).

As to claim 14, Jeyaraman teaches a system for improving the performance of a relational database data reduction from a source database to a target database (see Abstract), comprising of:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 22, Jeyaraman teaches a system for refining data replication between a source database and a target database (see Abstract), comprising of:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

Response to Arguments

5. Applicant's arguments filed on 11 December 2006 with respect to the rejected claims in view of the cited references have been fully considered but are moot in view of the new grounds for rejection.

Additional References

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to database synchronization and manufacturing process control in general:

Doc. No.	Assigned to
US 5878408 A	Van Huben; Gary Alan et al.
US 6625619 B1	McClendon; Susan et al.
US 5311438 A	Sellers; R. Drew et al.
US 6799080 B1	Hylden; Mark W. et al.
US 6202070 B1	Nguyen; Chau-Lang N. et al.
US 6615091 B1	Birchenough; Bill et al.
US 6839713 B1	Shi; Yurong et al.
US 5806074 A	Souder; Benny et al.

Kimemia, J.G., et al. "An algorithm for the computer control of production in a flexible manufacturing system"

Buzacott, J.A. "'Optimal' operating rules for automated manufacturing systems"

Kokkinaki, A.I., et al. "Error specification, monitoring and recovery in computer-integratedmanufacturing: an analytic approach"

Kokkinaki, A.I., et al. "A distributed task planning system for computer-integrated manufacturing systems"

Conclusion

7. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr
***

2 March 2007

TM 3/5/07

Tony Mahmoud
Patent Examiner